Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1. (*Currently Amended*) A compound layered type of sensing device, comprising:

a plurality of solid electrolyte plates; and

a plurality of pairs of electrodes, wherein each pair of electrodes is disposed ~~respectively~~ on at least one surface ~~surfaces~~ of one of the plurality of solid electrolyte plates, forming first to third electrochemical cells, wherein a gas to be measured is pre-processed under oxygen pumping carried out by the first electrochemical cell, a concentration of a particular gas component of the gas to be measured being detected by the second electrochemical cell and a difference in electromotive force between the gas to be measured and a reference gas being detected by the third electrochemical cell,

wherein a single pair of electrodes of the third electrochemical cell is disposed on the same surface of one of the plurality of solid electrolyte plates, and the first and third electrochemical cells are located on mutually different solid electrolyte plates of the plurality of solid electrolyte plates.

Claim 2. (*Previously Presented*) The sensing device of claim 1, further comprising first and second chambers formed in the device, the gas to be measured being introduced into

the first and second chambers, and a fourth electrochemical cell configured to detect a concentration of oxygen of the gas to be measured present in at least one of the first and second chambers.

Claim 3. (*Currently Amended*) The sensing device of claim 2, wherein the first chamber is formed to communicate with an outside of the device via a first diffusive resistance passage and the second chamber is formed to communicate with the first chamber via a second diffusive resistance passage, wherein

one of the two electrodes of the first electrochemical cell is located to be exposed to the first chamber so that the first electrochemical cell permits a given amount of oxygen to be introduced into or from the first chamber ~~correspondingly~~ corresponding to an amount of voltage applied to the first electrochemical cell, and

one of the two electrodes of the second electrochemical cell is located to be exposed to the second chamber so that applying a given amount of voltage to the electrodes of the second electrochemical cell permits the second electromechanical cell to detect current corresponding to the concentration of a particular gas component of the gas to be measured.

Claim 4. (*Canceled*)

Claim 5. (*Previously Presented*) The sensing device of claim 4, wherein one of the two electrodes of the first electrochemical cell and one of the two electrodes of the third electrochemical cell are located to be exposed to mutually different reference gas chambers of the plurality of reference gas chambers.

Claim 6. (*Currently Amended*) The sensing device of claim 2, further comprising ~~a plurality of~~ first and second reference gas chambers formed in the device,

wherein one of the two electrodes of the second electrochemical cell and one of the two electrodes of the fourth electrochemical cell are located to be exposed to the same reference gas chamber of the first and second ~~plurality of~~ reference gas chambers and the other of the two electrodes of the second electrochemical cell and the other of the two electrodes of the fourth electrochemical cell are located to be exposed to either one of the first and ~~or~~ second chambers[[, respectively]].

Claim 7. (*Previously Presented*) The sensing device of claim 6, wherein one of the two electrodes of the first electrochemical cell and one of the two electrodes of the third electrochemical cell are located to be exposed to mutually different reference gas chambers of the plurality of reference gas chambers.

Claim 8. (*Previously Presented*) The sensing device of claim 3, further comprising a plurality of reference gas chambers formed in the device,

wherein one of the two electrodes of the first electrochemical cell and one of the two electrodes of the third electrochemical cell are located to be exposed to mutually different reference gas chambers of the plurality of reference gas chambers.

Claim 9. (*Previously Presented*) The sensing device of claim 2, further comprising a plurality of reference gas chambers formed in the device,

wherein one of the two electrodes of the first electrochemical cell and one of the two electrodes of the third electrochemical cell are located to be exposed to mutually different reference gas chambers of the plurality of reference gas chambers.

Claim 10. (*Currently Amended*) The sensing device of claim 1, wherein a plate comprising alumina is placed between the first and second electrochemical cells ~~to~~ so that both the first and second cells are insulated to each other.

Claim 12. (*Currently Amended*) A compound layered type sensing device, comprising:

first and second solid electrolyte plates;

first and second chambers, each formed between the first and second solid electrolyte plates, into which a gas to be measured is introduced respectively, the first chamber ~~being connected to an~~ air outside ~~of~~ the device via a first diffusive resistance passage and the second chamber being connected to the first chamber via a second diffusive resistance passage;

first and second reference gas chambers into which a reference gas is introduced respectively, the first reference gas chamber being formed on one side of the first solid electrolyte plate opposite to the first and second chambers, and the second reference gas chamber being formed on one side of the second solid electrolyte plate opposite to the first and second chambers;

a first pair of electrodes comprising a pumping electrode and a reference pumping electrode to form a first electrochemical cell together with the second solid electrolyte plate, wherein the pumping electrode is located on the second solid electrolyte plate to be exposed to the first chamber and the reference pumping electrode is located to be exposed to the second reference gas chamber, whereby the first electrochemical cell pumps oxygen corresponding to an amount of voltage applied to the electrodes of the first electrochemical cell;

a second pair of electrodes comprising a sensing electrode and a reference sensing electrode to form a second electrochemical cell together with the first solid electrolyte plate, wherein the sensing electrode is located on the first solid electrolyte plate to be exposed to the second chamber and the reference sensing electrode is located to be exposed to the first reference gas chamber, whereby the second electrochemical cell produces current corresponding to a concentration of a particular gas component of the gas to be measured by applying a given amount of voltage to the electrodes of the second electrochemical cell; and

a third pair of electrodes comprising an oxygen sensing electrode and a reference oxygen sensing electrode to form a third electrochemical cell together with the first solid electrolyte plate, wherein the oxygen sensing electrode is located on a given surface of the first solid electrolyte plate to communicate with ~~an~~ air outside ~~of~~ the device and the reference oxygen sensing electrode is located on the given surface of the first solid electrolyte plate to be exposed to the first reference gas chamber, whereby the third electrochemical cell measures oxygen of the gas to be measured between the electrodes thereof.

Claim 13. (*Previously Presented*) The sensing device of claim 1, further comprising a heater disposed to provide the solid electrolyte plates with heat, wherein the second electrochemical cell is positionally more distant from the heater than the first electrochemical cell.

Claim 14. (*New*) The sensing device of claim 1, further comprising first and second chambers formed in the device, wherein one of the two electrodes of the second electrochemical cell is located to be exposed to the second chamber and one of the two electrodes of the fourth electrochemical cell is located to be exposed to either one of the first and second chambers.

Claim 15. (*New*) The sensing device of claim 1, further comprising first and second chambers formed in the device, wherein one of the two electrodes of the second electrochemical cell and one of the two electrodes of the fourth electrochemical cell are located to be exposed to the second chamber.

Claim 16. (*New*) The sensing device of claim 2, wherein one of the two electrodes of the second electrochemical cell is located to be exposed to the second chamber and one of the two electrodes of the fourth electrochemical cell is located to be exposed to either one of the first and second chambers.

Claim 17. (*New*) The sensing device of claim 2, wherein one of the two electrodes of the second electrochemical cell and one of the two electrodes of the fourth electrochemical cell are located to be exposed to the second chamber.

Claim 18. (*New*) The sensing device of claim 3, wherein one of the two electrodes of the fourth electrochemical cell is located to be exposed to either one of the first and second chambers.

Claim 19. (*New*) The sensing device of claim 3, wherein one of the two electrodes of the fourth electrochemical cell is located to be exposed to the second chamber.

Claim 20. (*New*) The sensing device of claim 1, wherein the third electrochemical cell is configured to be used for measuring a λ-characteristic of an automobile internal combustion engine.

Claim 21. (*New*) The sensing device of claim 1, wherein the second electrochemical cell is subjected to application of a constant voltage to measure a Nox concentration based on oxygen ion current caused in response to the application of a constant voltage.

Claim 22. (*New*) A compound layered type of sensing device, comprising:

a plurality of solid electrolyte plates; and

a plurality of pairs of electrodes, wherein each pair of electrodes is disposed on at least one surface of one of the plurality of solid electrolyte plates, forming first to third electrochemical cells, wherein a gas to be measured is pre-processed under oxygen pumping carried out by the first electrochemical cell, a concentration of a particular gas component of the gas to be measured being detected by the second electrochemical cell and a difference in electromotive force between the gas to be measured and a reference gas being detected by the third electrochemical cell,

wherein a single pair of electrodes of the third electrochemical cell is disposed on the same surface of one of the plurality of solid electrolyte plates, the first and third electrochemical cells are located on mutually different solid electrolyte plates of

the plurality of solid electrolyte plates, and the third electrochemical cell is configured to be used for measuring a λ-characteristic of an automobile internal combustion engine.